Agenda Item G.5.a Supplemental SSC Report 1 April 2025

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON COASTAL PELAGIC SPECIES SCIENCE AND MANAGEMENT PRIORITIES

The Scientific and Statistical Committee (SSC) discussed the science and management priorities needed to support the management of U.S. West Coast Coastal Pelagic Species (CPS) fisheries. The SSC received a presentation from Katrina Bernaus (Council staff) on a white paper (Agenda Item G.5 Attachment 1) that provides a list of science and management topics for CPS fisheries that the Council can reference in establishing workload priorities. The SSC generally agrees with the topics identified in the white paper and offers the following comments and recommendations on high-priority items and implementation considerations.

Stock structure for Pacific sardine

The reevaluation of the stock structure is the highest priority for Pacific sardine. Recent studies document limited evidence of genetic differentiation between the putative northern and southern subpopulations (NSP and SSP, respectively), raising questions about the current management unit. Clarifying the definition of the "stock" (e.g., biological versus management) is critical to aligning scientific understanding with regulatory objectives under the CPS fishery management plan (FMP).

The SSC emphasizes the need to prioritize stock definitions to enable further work on E_{MSY} and the DISTRIBUTION term in the sardine harvest control rule (HCR), as all three components are interdependent. Any change in the stock definition would necessitate revisions to the E_{MSY} formulation and assessment frameworks. As such, the SSC recommends approaching these issues as a package.

An increasing proportion of the U.S. sardine catch, particularly in southern California waters, has been assigned to the SSP based on habitat models. However, the SSP is not currently included in the CPS FMP. As a result, catches of the SSP are counted against the allowable catch for the NSP, but the biomass of the SSP is not included in the NSP assessment. Calculating a harvest limit based on an assumed stock unit but applying it to a different stock unit is scientifically inconsistent and incompatible with risk neutrality. If the current stock definitions are retained, the Council should consider identifying management approaches for the SSP given its inferred increased presence in U.S. waters.

While stock structure is a critical issue for Pacific sardine, the SSC notes that similar concerns are not currently as pressing for other CPS, so other issues should be key priorities for those species.

Use of *E*_{MSY} in harvest control rules

Re-examining the exploitation rate corresponding to maximum sustainable yield (E_{MSY}) for Pacific sardine based on an updated analysis of the relationship between environmental conditions and recruitment is a high priority. This should be done in coordination with the stock structure and DISTRIBUTION term re-evaluation. Current and alternative E_{MSY} formulations, including environment-dependent and fixed values, can be evaluated using a Management Strategy Evaluation (MSE) with an operating model that incorporates an updated, statistically-informed relationship between environmental conditions and recruitment.

DISTRIBUTION term in CPS HCRs

In coordination with a re-evaluation of stock structure and E_{MSY} , a framework-based approach should be developed for estimating the DISTRIBUTION term rather than relying on fixed values. The DISTRIBUTION term is used in the HCR to scale OFL/ABC to the proportion of the stock estimated to be within U.S. waters. Frameworking allows flexibility to incorporate new information as it becomes available and could better reflect dynamic shifts in species distributions due to environmental variability. This recommendation applies to Pacific sardine and other CPS such as anchovy.

Managing Annual Opportunity

The SSC suggests two additional topics under Managing Annual Opportunity.

More responsive HCRs

A more responsive and data-informed approach for setting OFLs in the years between stock assessments should be developed. The SSC has concerns about the use of catch-only projections to set OFLs for short-lived species with highly variable recruitment and biomass dynamics. Catch-only projections for species like Pacific sardine and Pacific mackerel rely much more on model-inferred than on data-based values for recruitment compared to groundfish or other long-lived species. For example, the July 2025 and July 2026 biomass estimates from the recent Pacific mackerel catch-only update are 94% and 98% informed by the stock-recruitment relationship, respectively. Alternative approaches could include the use of HCRs that rely on survey data that better capture current conditions. The approach developed for the central subpopulation of northern anchovy (CSNA) is an example of the integration of periodic assessments and survey data for updating the OFL and ABC.

Review of OFLs for other CPS

The SSC recommends that it formally reviews OFLs for all CPS on a regular (but not necessarily annual) basis.

General Comments on Prioritization Process

The SSC supports the proposed recurring process for reviewing CPS science and management priorities in November during even years, consistent with the stock assessment prioritization cycle. This would provide a structured approach for the Council and advisory bodies to revisit CPS science and management priorities and adjust workplans in response to new information.

Although these topics are technical in nature, decisions about changes to HCRs and stock structure, for example, will require broader input beyond the SSC. The SSC should continue to review any scientific inputs that support Council decision-making on these issues.

PFMC 04/12/25